ELSEVIER

Brain Research Protocols Vol. 3 (1999) 328–329

BRAIN RESEARCH PROTOCOLS

CONTENTS OF BRAIN RESEARCH PROTOCOLS VOLUME 3

VOL. 3 NO. 1 **SEPTEMBER 1998**

Guidelines for the submission of manuscripts v

Protocols

Simultaneous analysis of multiple gene expression patterns as a function of development, injury or senescence
J.L. Cook, V. Marcheselli, J. Alam, P.L. Deininger and N.G. Bazan (USA) 1

Newborn rat brainstem preparation with the trigeminal nerve attached for pain study
M. Hamba and H. Onimaru (Japan) 7

Laser-Doppler flowmetry utilizing a thinned skull cranial window preparation and automated stimulation
R.J. Gerrits, E.A. Stein and A.S. Greene (USA) 14

Simultaneous isotopic and nonisotopic in situ hybridization histochemistry with cRNA probes
J.A. Kerner, D.G. Standaert, J.B. Penney Jr., A.B. Young and G.B. Landwehrmeyer (USA, Germany) 22

Measurement of the extracellular H_2O_2 in the brain by microdialysis
B. Lei, N. Adachi and T. Arai (Japan) 33

An in vitro technique for tracing neuronal connections in the teleost brain
G.K.H. Zupanc (Germany, UK) 37

TUNEL, Hoechst and immunohistochemistry triple-labelling: an improved method for detection of apoptosis in tissue sections—an update
G. Whiteside and R. Munglani (UK) 52

lacZ Transgenic mice to monitor gene expression in embryo and adult
A. Schmidt, K. Tief, A. Foletti, A. Hunziker, D. Penna, E. Hummler and F. Beermann (Switzerland) 54

Experimental protocol for studying delayed effects of in vitro ischemia on neurotransmitter release from brain slices
S. Sbrenna, G. Calò, A. Siniscalchi, I. Badini, C. Bianchi and L. Beani (Italy) 61

Parallel regional quantification of choline acetyltransferase and cholinesterase activity in the central nervous system of an invertebrate (*Sepia officinalis*)
C. Bellanger, F. Dauphin, L.P. Belzunces and R. Chichery (France) 68

Cryopreservation of rat cortical synaptosomes and analysis of glucose and glutamate transporter activities, and mitochondrial function
J.G. Begley, D.A. Butterfield, J.N. Keller, T. Koppal, J. Drake and M.P. Mattson (USA) 76

Water-absorbent polymer as a carrier for a discrete deposit of antisense oligodeoxynucleotides in the central nervous system
M. Bannai, M. Ichikawa, F. Nishimura, M. Nishihara and M. Takahashi (Japan) 83

Quantification of a neurotrophin receptor from submilligram quantities of brain tissue using Western blotting
S.K. Suneja and S.J. Potashner (USA) 88

A mobile intracellular microelectrode designed to record from neurons in contracting tissue
W.A.A. Kunze (Australia) 94

Cognitive dysfunction and histological findings in rats with chronic-stage contusion and diffuse axonal injury
T. Yamaki, N. Murakami, Y. Iwamoto, T. Sakakibara, N. Kobori, S. Ueda, Y. Uwahodo and T. Kikuchi (Japan) 100

Using GADlacZ transgenic mice as a marker system for homotopic transplantation
G. Sekerková, Z. Katarova and G. Szabó (Hungary, Slovak Republic) 107

VOL. 3 NO. 2 **NOVEMBER 1998**

Guidelines for the submission of manuscripts iii

Protocols

Ice incubation step allows adherence of archival histological specimens on gelatin-coated slides for TUNEL staining
G.M. Seigel, J. Ambati, W. Richard Green and T.V. McDaniel (USA) 119

Experimental protocol for clinical analysis of cerebrospinal fluid by high resolution proton magnetic resonance spectroscopy
S. Maillet, J. Vion-Dury, S. Confort-Gouny, F. Nicoli, N.W. Lutz, P. Viout and P.J. Cozzone (France) 123

A novel method for self-administering addicting drugs intracerebroventricularly in a free-choice procedure
D. Braida, W. Virag, F. Ottonello, S. Inghilterra, E. Gori and M. Sala (Italy) 135

Molecular analysis of AMPA-specific receptors: subunit composition, editing, and calcium influx determination in small amounts of tissue
J.C. Lee, A. Greig, A. Ravindranathan, T.N. Parks and M.S. Rao (USA) 142

Simultaneous detection of glutamic acid decarboxylase and reelin mRNA in adult rat neurons using in situ hybridization and immunofluorescence
C. Pesold, M.G. Pisu, F. Impagnatiello, D.P. Uzunov and H.J. Caruncho (USA, Spain) 155

0006-8993/99/$ - see front matter © 1999 Elsevier Science B.V. All rights reserved.
PII: S1385-299X(98)00061-0

329

The inverted multilayer perceptron as a consistency measuring device in neuroanatomical image analysis
E. Josephson, M.L. Padgett and D.F. Buxton (USA) 161
Software implementation of statistical methods for the analysis of structure and patterns in neuroanatomical objects
S.L. Baader, K.L. Baader and K. Schilling (Germany, USA) 173
Rat brain primary neurons immobilized in basement membrane gel threads: an improved method for on-line ^{13}C NMR spectroscopy of live cells
A. Brand, C. Richter-Landsberg, U. Flögel, W. Willker and D. Leibfritz (Germany) 183
An improved method for culturing cerebellar Purkinje cells with differentiated dendrites under a mixed monolayer setting
S. Furuya, A. Makino and Y. Hirabayashi (Japan) 192
Functional topography of single cortical cells: an intracellular approach combined with optical imaging
P. Buzás, U.T. Eysel and Z.F. Kisvárday (Germany) 199
Three-vessel occlusion using a micro-clip for the proximal left middle cerebral artery produces a reliable neocortical infarct in rats
H. Yanamoto, I. Nagata, N. Hashimoto and H. Kikuchi (Japan) 209
Simultaneous investigation of the neuronal and vascular compartments in the guinea pig brain isolated in vitro
M. De Curtis, G. Biella, C. Buccellati and G. Folco (Italy) 221

VOL. 3 NO. 3 **JANUARY 1999**

Guidelines for the submission of manuscripts iii

Protocols

Highly sensitive radioactive in situ hybridization using full length hydrolyzed riboprobes to detect α_2 adrenoceptor subtype mRNAs in adult and developing rat brain
U.H. Winzer-Serhan, R.S. Broide, Y. Chen and F.M. Leslie (USA) 229
Rapid cloning of cDNA ends polymerase chain reaction of G-protein-coupled receptor kinase 6: an improved method to determine 5′- and 3′-cDNA ends
C. Fehr, M. Ficková, C. Hiemke and N. Dahmen (Germany) 242
Anoxic and hypoxic immature rat model for measurement of monoamine using in vivo microdialysis
W. Nakajima, A. Ishida and G. Takada (Japan) 252
A simple pressure microinjecting system for delivery of small substance volumes to the brain: application to the developmental study of thalamo-cortical projections in foetal and neonatal rats
A. Sbriccoli, D. Carretta, M. Santarelli, F. Pinto, A. Granato and D. Minciacchi (Italy) 257
An optimised procedure for prenatal ethanol exposure with determination of its effects on central nervous system connections
A. Sbriccoli, D. Carretta, M. Santarelli, A. Granato and D. Minciacchi (Italy) 264
An on-line method for the measurement of total protein output in biological fluids and secretory tissues after stimulation of intrinsic nerves and identification of neurotransmitters using immunohistochemical techniques
E. Adeghate and J. Singh (United Arab Emirates, UK) 270
Markers for neuronal degeneration in organotypic slice cultures
J. Noraberg, B.W. Kristensen and J. Zimmer (Denmark) 278
Differentiating condition-induced facilitation, inhibition and disinhibition in a complex series of reflexes in an electromyogram
H.W. Van der Glas, S.W. Cadden and J.H. Abbink (The Netherlands, UK) 291
Serial sectioning of thick tissue with a novel vibrating blade microtome
G.T. Prusky and J.E. McKenna (Canada) 302
A technique for ^{125}I-labelling of neurotrophins and the use of retrograde axonal transport as a bioassay
A.J. Reynolds and I.A. Hendry (Australia) 308
Intracellular filling and reconstruction of identified neurons in fixed rat brain slices
G. Prusky and T. Arjannikova (Canada) 313
The partner preference paradigm: a method to study sexual motivation and performance of female rats
R. Avitsur and R. Yirmiya (Israel) 320

Author Index 326

Contents of Brain Research Protocols Volume 3 328